

WHAT IS CLAIMED IS:

1. An air bearing slider comprising:
a slider body including a leading edge, a trailing edge and opposed sides and including an elongate length between the leading and trailing edges forming a leading edge portion, a trailing edge portion and an intermediate portion proximate to a center axis of the slider body and a cross width between the opposed sides and the intermediate portion having a length dimension no larger than length dimensions of the leading edge portion and the trailing edge portion and the trailing edge portion having a cross nodal portion and off nodal portions and the cross nodal portion having a cross width dimension no larger than a cross width dimension of the off nodal portions and the slider body including a raised bearing surface or surfaces elevated above milled surface or surfaces and the raised bearing surface or surfaces along the trailing edge portion having a narrow cross width profile within the cross nodal portion of the slider body to limit off nodal pressurization and the raised bearing surface or surfaces along the intermediate portion having an expanded cross width profile relative to the narrow cross width profile of the raised bearing surface or surfaces along the trailing edge portion of the slider body.
2. The slider of claim 1 wherein the intermediate portion includes opposed spaced pads spaced from a cross axis of the slider body forming the raised bearing surface or surfaces along the intermediate portion of the slider body.

3. The slider of claim 2 wherein the opposed spaced pads including a leading edge stepped trench to pressurize the opposed spaced pads.
4. The slider of claim 1 wherein the intermediate portion includes a raised cross rail forming the raised bearing surface or surfaces along the intermediate portion of the slider body having an expanded cross width dimension along the intermediate portion of the slider body and a shortened length dimension along the intermediate portion of the slider body.
5. The slider of claim 4 wherein the raised cross rail includes side portions on opposed sides of a cross axis of the slider body and the opposed side portions include leading edge trenches to pressurize the raised bearing surface or surfaces of the raised cross rail.
6. The slider of claim 1 wherein the intermediate portion includes a stepped cross rail providing a stepped interface to the raised bearing surface or surfaces along the intermediate portion of the slider body.
7. The slider of claim 1 wherein the intermediate portion includes contoured rails on opposed sides of a cross axis of the slider body forming the raised bearing surface or surfaces along the intermediate portion of the slider body and the contoured rails extending at an angle outwardly from a narrow cross width profile along the leading edge portion to an expanded cross width profile along the intermediate portion to provide the expanded cross width profile along the intermediate portion of the slider body.

8. The slider of claim 7 wherein the contoured rails extend from a leading edge bearing pad having a narrow cross width profile forming the raised bearing surface or surfaces along the leading edge portion of the slider body and including a contoured stepped bearing surface having a narrow cross width profile along the leading edge portion and a diamond shaped stepped profile extending along the intermediate portion of the slider body.
9. The slider of claim 1 including a leading edge pad or rail having a narrow cross width profile within a cross nodal region of the leading edge portion of the slider body.
10. The slider of claim 1 wherein the intermediate portion includes a stepped cross rail having a shortened length dimension along the intermediate portion of the slider body and an expanded stepped cross profile dimension.
11. The slider of claim 1 wherein the trailing edge portion includes a trailing edge rail or pad having a narrow cross width profile to form the narrow cross width profile of the raised bearing surface or surfaces along the trailing edge portion of the slider body.
12. An air bearing slider comprising:
a slider body having a leading edge, a trailing edge, opposed sides and a cross width between the opposed sides and the slider body including a raised bearing surface or surfaces elevated above a recessed surface or surfaces

and the raised bearing surface or surfaces having a cross width profile including narrow cross width profiles along leading and trailing edge portions of the slider body and an expanded cross width profile along an intermediate portion of the slider body having a length dimension no larger than the leading and trailing edge portions of the slider body to limit off nodal pressurization.

13. The slider of claim 12 wherein the raised bearing surfaces or surfaces along the intermediate portion includes a raised cross rail or opposed raised pads having a shortened length dimension and forming the expanded cross width profile along the intermediate portion of the slider body.

14. The slider of claim 13 wherein the intermediate portion further comprises a stepped cross rail having a stepped profile and a shortened length dimension to form a stepped interface to the raised cross rail or the opposed raised pads.

15. The slider of claim 12 wherein the leading edge portion includes a raised center pad or rail having a narrow cross width dimension to form the raised bearing surface or surfaces along the leading edge portion of the slider body.

16. The slider of claim 15 and further including stepped rails along the trailing edge portion of the slider body having an expanded cross width profile.

17. The slider of claim 12 wherein the leading edge portion includes a leading edge rail or pad having a narrow cross width profile to form the raised bearing surface or surfaces along the leading edge portion of the slider body.

18. The slider of claim 12 wherein the intermediate portion includes contoured rails on opposed sides of a cross axis of the slider body and the contoured rails extending at an angle outwardly from the narrow raised bearing surface profile along the leading edge portion to the expanded raised bearing surface profile along the intermediate portion to provide the expanded cross width profile along the intermediate portion of the slider body.

19. The slider of claim 18 wherein the contoured rails extend from a leading edge bearing pad having a narrow raised bearing surface cross width profile and including a contoured stepped bearing surface having a narrow cross width stepped profile along the leading edge portion and a diamond shaped profile extending along the intermediate portion of the slider body.

20. An air bearing slider comprising:
a slider body including a leading edge, a trailing edge and opposed sides; and
bearing surface means on the slider body for providing a nodal bearing
pressure profile to limit off-nodal pressurization.

21. An air bearing slider comprising:
a slider body having a leading edge, a trailing edge and opposed sides; and

raised bearing surfaces having a perimeter surface profile including a narrow leading edge profile width, an expanded intermediate profile width and a trailing edge profile having a narrowing width profile relative to the expanded intermediate profile width to limit off-nodal air pressurization.